



## CAPITAL REQUEST APPROVAL FORM

Original ☒ [X]Revision ☐ [ ]

Location:

Desert View Power

Project Number:

3029-00-205

Project Name:

Air Heater Tube Replacement Project

Project Type:

Project Description Summary - Purpose and Benefit:

Remove and replace approximately 350 primary air heater tubes in Boiler #1 and 350 primary air heater tubes in Boiler #2.

Submitted By:

James R. Huffman

Date Submitted:

4/15/2019

Project Start Date:

May-19

Construction Start Date:

May-19Budgeted Project: Yes ☒ [X] No ☐ [ ]

Service Start Date:

May-19If yes, \$ Amount in Annual Budget (\$000): \$150

Project Completion Date:

May-19

### PROJECT COST ESTIMATE:

Materials and Outside Labor (Description):

AmountTotalLabor - CMS firm fixed price.\$ 175,000Material - Warehouse stores.Subtotal-Materials and Outside Labor\$ 175,000

Other Project Costs (Description):

Subtotal-Other Project Costs\$ -SUBTOTAL\$ 175,000

Engineering

0.0%-

Contingency and Estimating Allowance

5.0%8,750

Interest During Construction

0.0%-SUBTOTAL\$ 8,750TOTAL ESTIMATED COST OF PROJECT\$ 183,750

### APPROVALS:

Signature and Date

Board Member

President

Controller

Senior VP, Operations

Plant Manager

Originator

James R. Huffman 4/15/19

For Corporate Use Only:

☐ [ ] Project Approved☐ [ ] Project Declined

Notification Date:

☐ [ ] Further Action Required:



## CAPITAL REQUEST APPROVAL FORM

Original ☒ [X]  
Revision ☐ [ ]

Location: Desert View Power Project Number: \_\_\_\_\_  
Project Name: Air Heater Tube Replacement Project Project Type: \_\_\_\_\_

Project Description Summary - Purpose and Benefit:

Remove and replace approximately 350 primary air heater tubes in Boiler #1 and 350 primary air heater tubes in Boiler #2.

Submitted By: James R. Huffman Project Start Date: May-19  
Date Submitted: 4/15/2019 Construction Start Date: May-19  
Budgeted Project: Yes ☒ [X] No ☐ [ ] Service Start Date: May-19  
If yes, \$ Amount in Annual Budget (\$000): \$150 Project Completion Date: May-19

### PROJECT COST ESTIMATE:

| Materials and Outside Labor (Description): | Amount     | Total      |
|--|------------|------------|
| Labor - CMS firm fixed price.              | \$ 175,000 |            |
| Material - Warehouse stores.               |            |            |
| Subtotal-Materials and Outside Labor       |            | \$ 175,000 |
| Other Project Costs (Description):         |            |            |
| Subtotal-Other Project Costs               |            | \$ -       |
| SUBTOTAL                                   |            | \$ 175,000 |
| Engineering                                | 0.0%       | -          |
| Contingency and Estimating Allowance       | 5.0%       | 8,750      |
| Interest During Construction               | 0.0%       | -          |
| SUBTOTAL                                   |            | \$ 8,750   |
| TOTAL ESTIMATED COST OF PROJECT            |            | \$ 183,750 |

### APPROVALS:

Signature and Date

Board Member  
President  
Controller  
Senior VP, Operations  
Plant Manager  
Originator

James R. Huffman 4/15/19

For Corporate Use Only:

☐ [ ] Project Approved  
☐ [ ] Further Action Required:

☐ [ ] Project Declined

Notification Date: \_\_\_\_\_



## CAPITAL REQUEST ANALYSIS FORM

Original [ X ]  
Revision [   ]

Location: Desert View Power Project Number: 0

Project Name: Air Heater Tube Replacement Project Project Start Date: May-19

### 18 MONTH CASH FLOW AND PROJECT COMPLETION SCHEDULE:

|                       | Carryover | May-19 | Jun-19 | Jul-19 | Aug-19 | Sep-19  | Oct-19 |
|-----------------------|-----------|--------|--------|--------|--------|---------|--------|
| Expenditures (\$ 000) | \$ -      | \$ 175 | \$ -   | \$ -   | \$ -   | \$ -    | \$ -   |
| Cumulative % Complete | 0%        | 100%   | 100%   | 100%   | 100%   | 100%    | 100%   |
|                       | Nov-19    | Dec-19 | Jan-20 | Feb-20 | Mar-20 | Apr-20  | May-20 |
| Expenditures (\$ 000) | \$ -      | \$ -   | \$ -   | \$ -   | \$ -   | \$ -    | \$ -   |
| Cumulative % Complete | 100%      | 100%   | 100%   | 100%   | 100%   | 100%    | 100%   |
|                       | Jun-20    | Jul-20 | Aug-20 | Sep-20 | Oct-20 | Forward | TOTAL  |
| Expenditures (\$ 000) | \$ -      | \$ -   | \$ -   | \$ -   | \$ -   | \$ -    | \$ 175 |
| Cumulative % Complete | 100%      | 100%   | 100%   | 100%   | 100%   | 100%    |        |

### FINANCIAL IMPACT SUMMARY: (Derived from Proforma Income Statement)

|                                  |      |                             |      |
|----------------------------------|------|-----------------------------|------|
| Annual Savings                   | \$ - | Debt Coverage Average       |      |
| Increase in annual volume: Sales | \$ - | Debt Coverage Minimum       |      |
| R.O.A. before tax                |      | Equity Payback              | \$ - |
| I.R.R. after tax                 |      | Change in energy efficiency |      |

**ADDITIONAL CORPORATE SUPPORT REQUIRED:**

- |  |  |
|--|--|
| <input type="checkbox"/> Service Interruptions | <input type="checkbox"/> Environmental Assessments |
| <input type="checkbox"/> Plant Shutdowns       | <input type="checkbox"/> Water/Land/Air Easements  |
| <input type="checkbox"/> Additional Personnel  | <input type="checkbox"/> Regulatory Approval       |
| <input type="checkbox"/> Customer Agreements   | <input type="checkbox"/> Special Permits           |
| <input type="checkbox"/> Street Openings       | <input type="checkbox"/> Safety                    |
| <input type="checkbox"/> Right-of-Way Issues   | <input type="checkbox"/> Other: _____              |
| <input type="checkbox"/> Zoning Issues         | <input type="checkbox"/> Other: _____              |

**SUPPORTING SCHEDULES:** (Please List and Attach)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

**POST COMPLETION DATE OF REVIEW:** \_\_\_\_\_



## CAPITAL REQUEST NARRATIVE SUMMARY

Original [ X ]  
Revision [   ]

Location: Desert View Power

Project Number: 0

Project Name: Air Heater Tube Replacement Project

Project Start Date: May-19

### Background:

The boiler air heaters pre-heat the combustion air to improve boiler heat rate efficiency. The air heaters are tubular heat exchange design, with clean air flowing through the tubes and flue gas flowing across the tubes. Over time the air heater tubes fail due to erosion and/or corrosion. Air heater tubes life expectancy is 10-15 years. The primary air heater first pass tube banks on both boilers have 30% or more of the tubes plugged due to leakage. This project will replace the primary air heater first pass tubes restoring air heater performance.

### Description:

Remove and replace approximately 350 primary air heater first pass tubes in each boiler. This is a turn-key project with a firm fixed price by Corrosion Monitoring Services (CMS), who is the industry leader in air heater repair and replacement work.

### Implementation:

CMS will mobilize, remove, replace, test, and demobilize to complete each boiler's primary air heater first pass tubes replacement project. CMS will provide all labor, tools, consumables, and oversight for the project. CMS will use the air heater tubes that are in stores. DVP has approximately 800 air heater tubes in stores.

### Capital Cost:

The cash cost of the project is capped at \$175,000 as a firm fixed, turn-key bid by CMS. The tubes cost will be transferred from stores account to in service account.

### Benefits:

Replacement of the plugged/leaking primary air heater first pass tubes will restore air heater performance and improve boiler fuel combustion efficiency.

## Violeta Hernandez

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**From:** Charlie Abbott  
**Sent:** Friday, April 19, 2019 9:34 AM  
**To:** Violeta Hernandez  
**Cc:** Mitchell Martin  
**Subject:** FW: DVP CapEx Forms  
**Attachments:** DVP 2019 Air Heater Tube Replacement CapEx.pdf; DVP 2019 Wood Hog Replacement CapEx.pdf

Approved.

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**From:** Russell Huffman  
**Sent:** Friday, April 19, 2019 9:05 AM  
**To:** Charlie Abbott <CAbbott@greenleaf-power.com>  
**Cc:** Mitchell Martin <MMartin@greenleaf-power.com>  
**Subject:** DVP CapEx Forms

For review and approval.

*James R. Huffman*

V.P. California Operations  
Greenleaf Power, LLC  
Desert View Power  
62300 Gene Welmas Drive  
Indio, CA 92254  
760-262-1653 (office)  
760-393-1308 (cell)  
[rhuffman@greenleaf-power.com](mailto:rhuffman@greenleaf-power.com)